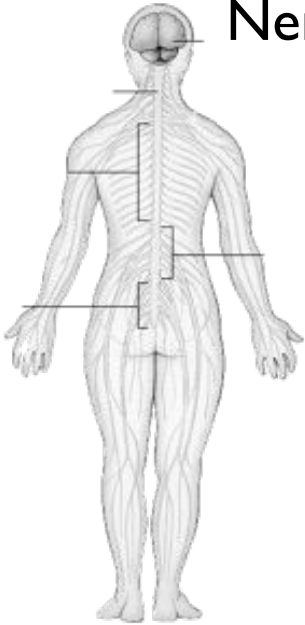


Lab 8

Nervous System
Ex 21, 22

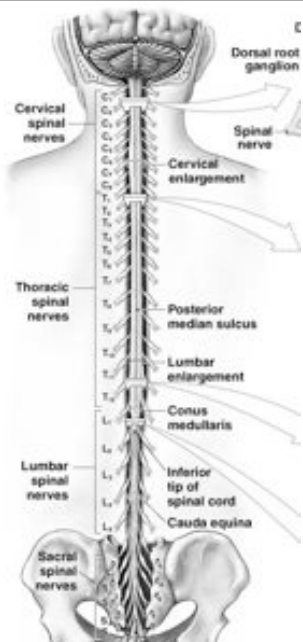
1

Nervous System



- Central Nervous System (CNS)
 - brain and spinal cord
 - integration
- Peripheral Nervous System (PNS)
 - all nervous tissue outside the CNS
 - nerves
 - sensory receptors

2

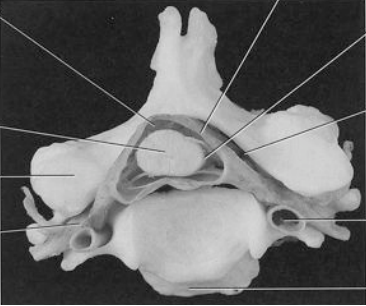


Spinal Cord

- Extension of the brain stem
- cervical, thoracic, lumbar and sacral sections
- 31 pairs of spinal nerves exit off of the cord
 - cervical, thoracic, lumbar, sacral and coccygeal segments
- Serves as a sensory and motor connection between the brain and spinal cord
 - some integration (reflexes)

3

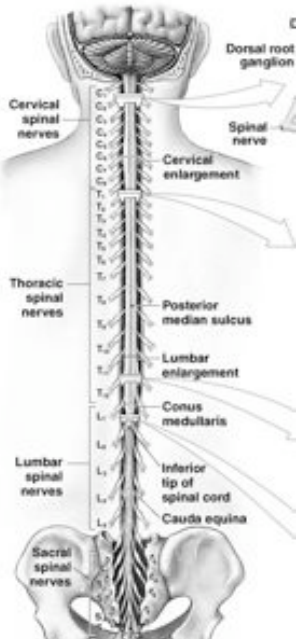
Spinal Canal



- Spinal cord travels through the vertebral foramen of each vertebra
- The space created by the combination of all of the vertebral foramina is called the spinal canal
- extends from the base of the skull to the end of the sacrum

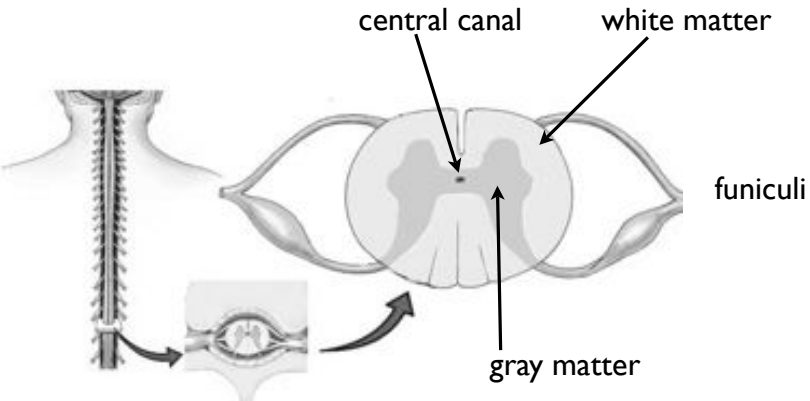
4

End of Spinal Cord



- Conus Medullaris
 - spinal cord ends here
 - at about L2
 - spinal cord does not extend through the whole spinal canal
- Cauda Equina
 - the spinal nerves that extend past the conus medullaris

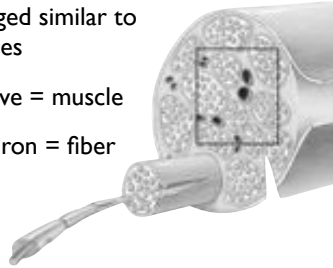
Cord Anatomy





Nerves

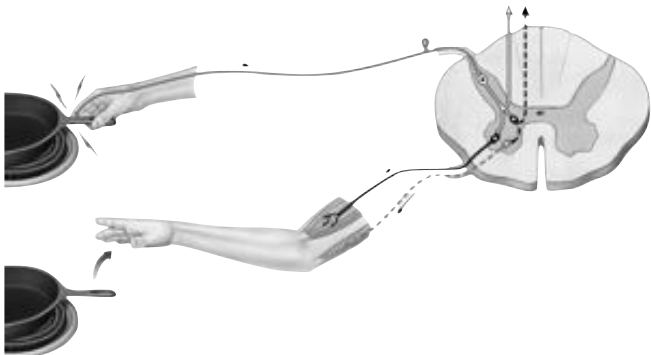
- Made up of either a single spinal nerve or a mixture of several spinal nerves
- Carries mixed information
 - sensory (afferent) to spinal cord
 - motor (efferent) out of spinal cord
- Arranged similar to muscles
 - nerve = muscle
 - neuron = fiber



9

Reflexes

- Fast response to a stimulus
- often involuntary
- often protective



10
